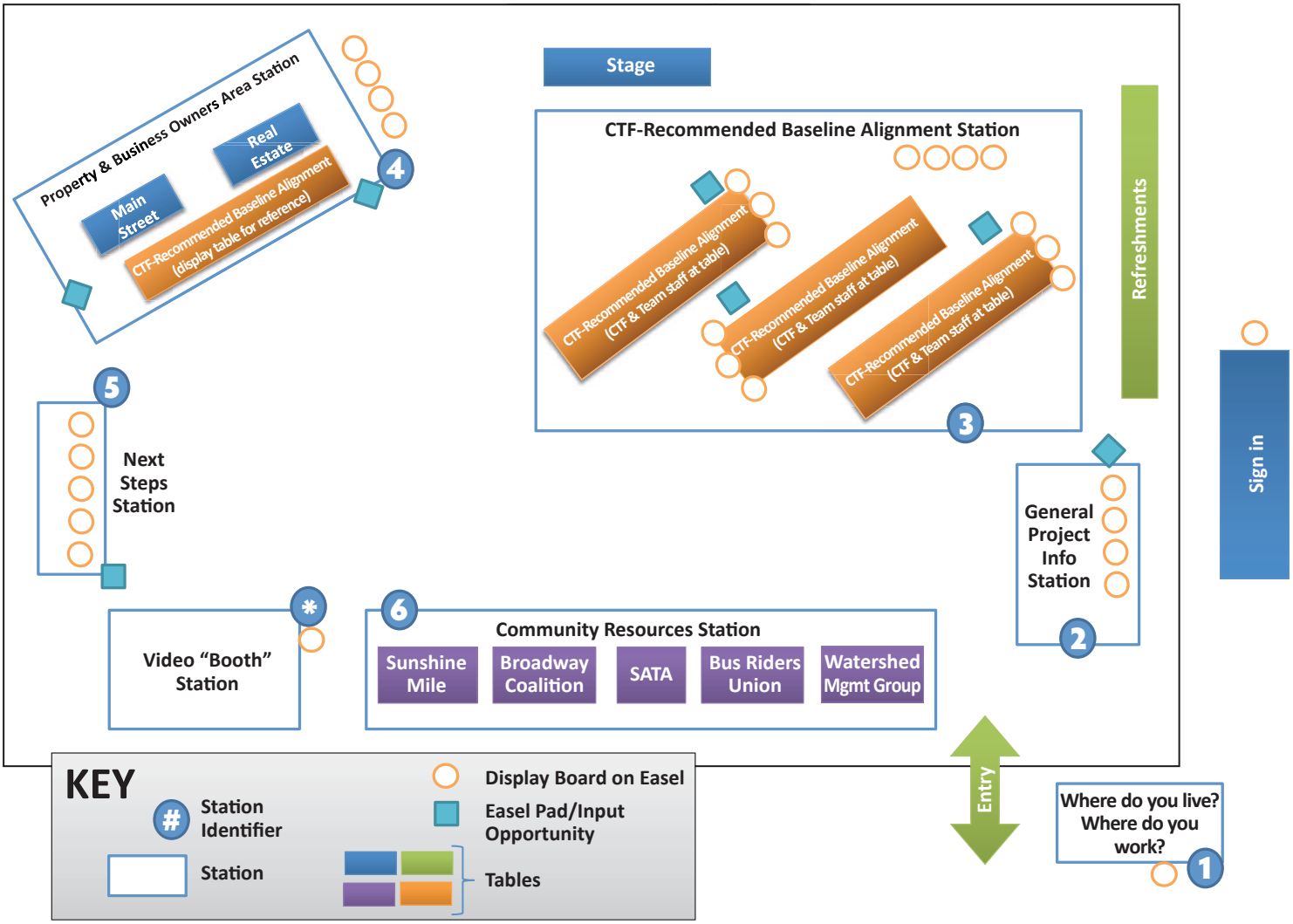
Room Layout and Station Information

Room Layout



1 Where do you live? Where do you work?

2 General Project Information

A brief overview of the project; listings of the Citizens Task Force, project design team, and the Technical Advisory Committee members; the Citizens Task Force's Vision and Goals Statements, and Performance Measures used to assess the project designs.

3 The Citizens Task Force (CTF) Design and Baseline Alignment Recommendations

Review, ask question and provide input on the maps showing the CTF-recommended alignment and design recommendations with members of the Citizens Task Force and the project team, understand what might cause modifications and how they can be handled as technical design continues. Also, learn about Indirect Left Turns and see possible concepts for Campbell/Kino intersection.

4 Project Area Property and Business Owners

Property and business owners are uniquely affected by the project and its impacts on properties and businesses. Get information and provide feedback to representatives from the CTF and project team. Learn about the impacts to properties, the property acquisition process, and existing benefits and services available.

5 Next Steps

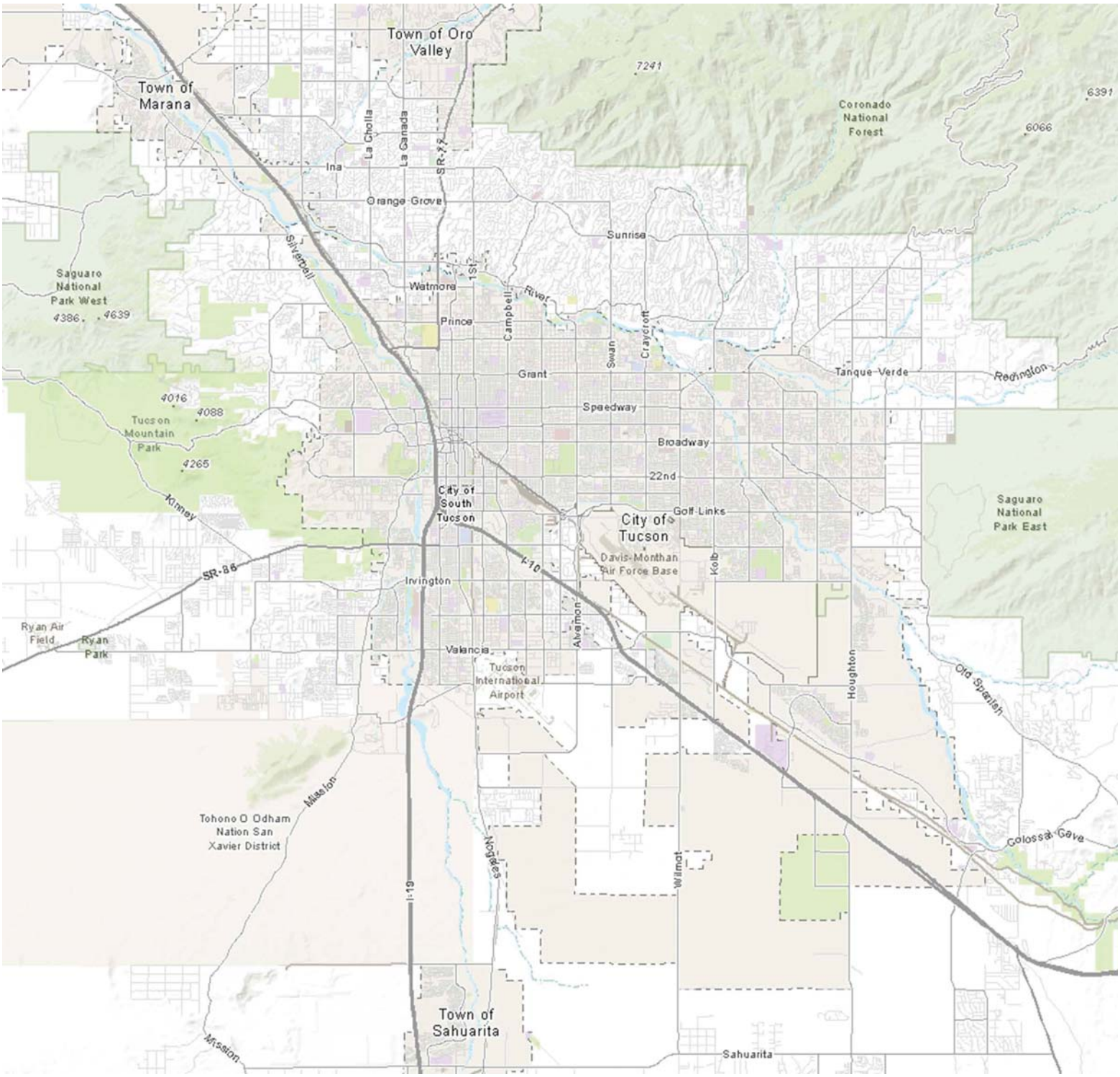
Learn what project milestones are expected for 2015 and beyond.

6 Community Resources

Community organizations will have representatives on hand to provide information.

* Video "Booth"

Where Do You Live / Work?



= Live

= Work

Vision and Goals

CITIZENS TASK FORCE DRAFT VISION

The Citizens Task Force's recommended design solution for Broadway Boulevard from Euclid to Country Club will balance the varied needs of the Boulevard's users and surrounding neighborhood and districts. It will maximize benefits and minimize negative impacts.

The recommended design will support future for Broadway that will—

- **maintain and improve the provision of affordable, efficient, and sustainable transportation choices serving local and regional transportation needs for walking, bicycling, transit, and vehicles;**
- **provide improved safety and comfort for all users;**
- **support and improve the economic vitality and the valued character of development along the Boulevard;**
- **improve the visual character of the street and the physical condition of the public realm in support of the unique character of the historic and unique character of the places along the Boulevard;**
- **strengthen the relationship between transportation and uses along the Boulevard to adjacent neighborhoods through appropriate access, visual and physical character, and encouraging supportive uses;**
- **balance the Boulevard's function as a major street serving citywide multimodal mobility with its function as a stronger retail, service, and civic destination;**
- **provide opportunities for the improved public health of those within the planning area and the region; and,**
- **improve environmental sustainability in Tucson.**

The Broadway Boulevard planning and design work will all be guided by a public participation process that actively seeks out and engages the full diversity of stakeholders in a substantive dialogue, and utilize a design process that aims for the change resulting from the transportation improvements to support positive improvement to the districts and neighborhoods along Broadway Boulevard.

CITIZENS TASK FORCE POTENTIAL GOAL STATEMENTS

Goal Topics		Potential Goal Statements
Neighborhoods and Districts		
Recognize & support the distinct character of Broadway and its context of Neighborhoods and Districts	– Broadway Boulevard is a series of places along a corridor	▪ Recognize and support distinct character of Broadway as a series of places, defined by their historic and significant structures, signage, landscape, and uses. ▪ Recognize and reinforce existing areas with distinct character and support the creation of distinct new places so that Broadway is a linked series of places, defined by their historic and significant structures, signage, landscape, and uses.
	– Visually enhance district identities	▪ Develop identities for segments and centers of activity along Broadway. ▪ Design the roadway, its streetscape, wayfinding signage, and the uses along it to give identity to the 'gateways' along Broadway - to neighborhoods, to Downtown, and to the University, and others.
	– Encourage an appropriate mix of uses to support distinct districts	
	– Consider existing special features *("Sacred Places")*	▪ Preserve and protect the existing special features and places along Broadway ▪ Preserve and enhance key features of this segment of Broadway
Link neighborhoods to district uses		▪ Provide better integration of neighborhoods to districts on Broadway with a walkable circulation network and by encouraging policies for neighborhood-supporting uses
Improve quality of Broadway and its context	– Encourage improvements to existing development	Respect the aesthetic character of Broadway and the destinations along it while encouraging maintenance and reinvestment to improve aesthetic appearance of existing development. Also, encourage new development that complements today's aesthetic character.
	– Encourage high quality new development	
	– Provide and encourage public gathering places	▪ Encourage the creation of public gathering places and provide for public places as feasible through design of the boulevard.
Protect Adjacent Neighborhoods	– From noise, light, and air quality impacts	▪ Minimize noise, light, and air quality, impacts from traffic on Broadway Boulevard
	– From cut through traffic and overflow parking	▪ Minimize overflow parking, cut through traffic, noise, light, and other impacts from development along Broadway into adjacent neighborhoods
	– Privacy from adjacent district development	▪ Maintain and improve privacy between neighborhoods and development along Broadway
	– By transitioning intensity from corridor towards neighborhoods	▪ Do not allow new intensity along Broadway ▪ Design any new development along Broadway to transition to a lower intensity where it is adjacent to neighborhoods
	– Particularly existing and potential National Register of Historic Places (NRHP) Historic District designations	▪ Protect all contributing structures for existing and potential NRHP Historic District designations ▪ Protect best examples of contributing structures to existing and potential NRHP Historic District designations ▪ To extent feasible given needed transportation and other improvements along Broadway, protect the best examples of contributing structures to existing and potential NRHP Historic District designations while maintaining the viability of Historic Districts
Protect existing businesses and enhance the business environment	– Small and local businesses	▪ Nurture Broadway's role as a place for new and existing small, local and incubator businesses through preserving existing development and its lower rents and by encouraging new policies to require new development to help create commercial space for small, local businesses.
	– Affordable rents / potential for business to own property	
	– Neighborhood-serving uses	▪ Encourage a mix of neighborhood and regional serving businesses to support vibrant mixed use districts along Broadway.
	– Viability of businesses before and after construction	▪ Avoid impacts to the viability of existing businesses and property along Broadway to the extent feasible, and otherwise maximize the viability of property and business before, during and after construction.
	– Economic connections	▪ Improve the cultural, economic, and transportation linkages of Broadway and the uses along it with Downtown and the University of Arizona.
Protect residences and enhance the environment for residences	– Choice of housing types	▪ Encourage protection of existing and creation of new housing to maintain diversity of housing types and rental and ownership choices that are affordable to a range of households.
	– Affordable rents and ownership	
Buildings and Site Development		
Recognize value of historic buildings and sites		▪ Protect all individually historic and contributing buildings, signage, and sites. ▪ Protect best examples of individually historic and contributing buildings, signage, and sites. ▪ To extent feasible given needed transportation and other improvements along Broadway, protect the best examples of individually historic and contributing buildings, signage, and sites.
Recognize value of significant buildings and sites		▪ Protect all significant buildings and sites. ▪ Protect best examples of significant buildings and sites. ▪ To extent feasible given needed transportation and other improvements along Broadway, protect the best examples of significant buildings and sites.

Vision and Goals

Goal Topics		Potential Goal Statements
Buildings and Site Development (continued)		
Support development scale and mix of use appropriate to context	– Appropriate to existing context (heights, setbacks, etc.) – To support multimodal investment (mix uses, pedestrian-oriented, intensity, etc.)	▪ Encourage preservation, remodeling, and new development that is scaled to existing context while allowing for a mix and intensity of use to support walking, bicycling, and transit use. ▪ Encourage new development at a scale that is more intense than what exists today if it transitions at its edges to the scale of existing context, and if it supports the multi-modal, economic development, and affordability goals for Broadway.
Consider importance of parking supply and demand		▪ Encourage efficient manage corridor's parking demand and supply to provide enough, but not too much parking. ▪ Encourage development of district parking lots and other methods to help maintain viability of existing businesses and properties and too help manage parking supply.
Multimodal Street Design		
Balancing modes to create a 'Complete Street'		▪ Optimize the use of the right-of-way to improve mobility and safety for all modes of travel along and across Broadway.
Broadway's role in the transportation network		
Vehicular traffic	– Through mobility	▪ Improve vehicular mobility along Broadway through any means other than widening the roadway ▪ Improve vehicular mobility along Broadway while minimizing widening of the roadway and otherwise minimizing impacts to adjacent property to the extent feasible ▪ Increase capacity of Broadway to accommodate future growth in through and commute traffic
	– Corridor/neighborhood access	▪ Provide high-quality access for vehicles to adjacent development and neighborhoods.
Transit	– Through mobility	▪ Provide effective east-west high capacity transit through the Broadway study area on Broadway Boulevard and/or parallel routes. ▪ Provide effective east-west high capacity transit on Broadway Boulevard.
	– Corridor/neighborhood access – Improve transit stops	▪ Improve the quality, comfort, and convenience of transit access for the Broadway study area, including improved safety at transit stops.
Bicycling	– Provide east-west mobility for bicyclists of various skill levels	▪ Provide east-west mobility for bicyclists of various skill levels on Broadway Boulevard and parallel streets
	– Broadway crossings / Bicycle network connections	▪ Improve crossings for bicyclists, including those that connect with bicycle network
Pedestrian	– Provide for movement along and across Broadway, include buffering pedestrians from the roadway	▪ Create an inviting pedestrian environment that encourages walking along Broadway and for crossing the Boulevard. ▪ Provide a buffer between pedestrians and traffic on Broadway that is effective given the speed and amount of vehicular traffic.
	– Provide connections between districts and neighborhoods	▪ Enable and provide quality connections between districts and neighborhoods
Universal design (ADA access)		▪ Exceed ADA minimum requirements where ever feasible to maximize the level of universal design, including enhanced wayfinding techniques.
Speed Management / Traffic Calming		▪ Design improvements to Broadway to encourage traffic to travel no faster than the speed limit
Landscape / Streetscape Design	– Improve the environment along Broadway	▪ Increase the amount and quality of landscaping and lighting along Broadway through an approach that is efficient in terms of capital and maintenance costs.
	– Select context appropriate plants and other design elements	▪ Use plants that are native to the Sonoran Desert or plants that are adaptive to the Tucson environment, and that along with other streetscape elements help to create the desired character for the districts along Broadway.
Public Art		▪ Provide opportunities for public art that complement the aesthetic and placemaking goals for Broadway
Right-of-way Impacts		
Minimize physical impacts		▪ Avoid physical impacts to all existing property and businesses along Broadway Boulevard. ▪ To the extent feasible, minimize physical impacts to existing property and businesses along Broadway Boulevard while achieving the transportation and other goals for improvement to the Boulevard.
Width of Broadway Boulevard		▪ Do not widen Broadway Boulevard. ▪ Minimize widening of Broadway Boulevard. ▪ Widen Broadway Boulevard to the extent needed to achieve other goals.
Sustainability		
Environmental	– General environmental impact	▪ Utilize materials and design techniques in the improvements to Broadway that minimize environmental impacts, including energy efficient lighting and other means.
Environmental - continued	– Water use and stormwater management	▪ Emphasize use of water harvesting and storm water management techniques in landscaped areas and the use of permeable surfaces and paving to extent feasible
	– Air quality	▪ Design the improvements to Broadway to help reduce air quality impacts from green house gases, particulates, and other emissions.
	– Shade	▪ Reduce heat island effect through various design measures, such as shading and high albedo pavement, while also providing shade for pedestrian comfort.
Economic	– -budget and cost of operations and maintenance	▪ Design improvements to deliver them within available budget, and to allow the roadway, its landscape, transit improvements, and other elements to fit the budget constraints for operations and maintenance.
Planning and Design Process		
Learn from best example practices (in Tucson and other places)		▪ Learn from exemplary multimodal and context sensitive transportation projects in Tucson and elsewhere in the planning and implementation of the Broadway Boulevard process.
Public input	– Take process to stakeholders and report back to CTF	▪ Efficiently and effectively seek out public input to draw from stakeholders in the study area and throughout the city and region to provide input for the on-going Citizens Task Force process.
	– Planning, Design, Construction, and Post Construction phases	▪ Continue the public process into the construction and post-construction phases of the project.
Agency and organization coordination		▪ Coordinate with other agencies and organizations that are project stakeholders so they can understand the on-going efforts and goals for the future of Broadway Boulevard.
More than transportation performance metrics		▪ Utilize more than just transportation performance measures in the decision-making process for the design and implementation.
Be effective		▪ Design and build Broadway as a long-term, quality improvement that will last and be effectively maintained for decades into the future; and create certainty for existing businesses and property owners and support investment.
Be efficient		▪ Be as efficient in terms of time and budget as possible in the planning, design, and construction process.

Performance Measures Topic Areas

The following Topic Areas were consolidated for discussion during the Fall 2013's Public Meeting #3. Performance measures were generated by the Project Team in order to measure how potential roadway designs performed in these Topic Areas.

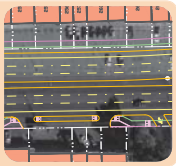
COMMUNITY CHARACTER AND ECONOMIC PERFORMANCE

Avoid Historic/Significant Building Impacts

- Width of right-of-way (minimizing can negatively or positively affect other performance measures)
- Alignment of street: Choice/balancing of potential impacts to different sides of the street

Minimize Business Impacts

- Width of right-of-way (minimizing can negatively or positively affect other performance measures)
- Alignment of street: Choice/balancing of potential impacts to different sides of the street
- Design of parking impact avoidance or replacement



Change in Economic Potential

- Combination of Minimizing Business Impacts, potential for reuse of remnant parcels and revitalization of existing development

Visual Quality

- Preservation and enhancement of historic/ significant buildings
- Street design to enhance visual quality

Walkable Community

- Combination of pedestrian conditions, mix and quality of land use

TRANSPORTATION PERFORMANCE

Pedestrian Access and Mobility

- Width of sidewalk
- Buffering from traffic–width and characteristics
- Shade
- Street crossings width and design
- Universal Design and ADA
- Driveway access frequency/size

Bicycle Access and Mobility

- Separation from vehicle lanes–generally include 7' wide partially raised cycle track
- Crossing conflicts with autos and buses
- Consider bicycle network access

Transit Access and Mobility

- Travel time (not known prior to modeling update)
- Station facilities
- Potential for high capacity transit–space for dedicated lanes, stations, etc. in right-of-way

Vehicular Access and Mobility

- Travel time
- Lane continuity
- Accessibility to businesses and neighborhoods

COST/FUNDING VIABILITY

Construction Cost

- $29.3M budgeted per 2006 voter- approved RTA Plan (Full potential for variation not known until cost estimate completed)

Fundability

- Ability to maintain county and RTA funding

SUSTAINABILITY PERFORMANCE

Provide for Changing Transportation Needs

- Combination of Minimizing Business Impacts, potential for reuse of remnant parcels and revitalization of existing development

Health Benefits of Walking and Biking

- Combination of pedestrian and bicycling performance and Walkable Community measure

Water Harvesting and Green Streets

- Meet or exceed City's Green Streets Active Practice Guidelines

Reduce Heat Island

- Combination of pedestrian and bicycling performance and Walkable Community measure

Manageable Operations and Maintenance Costs

- Operations and maintenance costs for pavement, signals, transit, and landscape are yet to be determined

The Citizens Task Force (CTF)

BROADWAY BOULEVARD
EUCLID to COUNTRY CLUB

STAKEHOLDER GROUP REPRESENTATION	TASK FORCE MEMBER
Neighbor Interests - NW	**Colby Henley**, Rincon Heights NA (Historic District)
Neighbor Interests - NE	**Mary Durham-Pflibsen**, Sam Hughes NA (Historic District), **CTF Chairperson**
Neighbor Interests - SE	**Shirley Papuga**, Broadmoor-Broadway Village NA
Neighbor Interests - SW	**Michael J. "Jamey" Sumner**, Miles NA
Business Interests - North	**Anthony R. DiGrazia,** *Rocco's Little Chicago*
Business Interests - North	**Bruce Fairchild,** *Bruce's Lock Shop*, **CTF Vice Chairperson**
Business Interests - South	**Bob Belman,** *Arizona Auto Refrigeration*
Business Interests - South	**Diane Robles,** *Child & Family Resources, Inc.*
Citizens Transportation Advisory Committee (CTAC)	**Dale Calvert, CPA**
Tucson Pima County Bicycle Advisory Committee	**Anne Padias, Ph.D.**
Tucson Planning Commission	**Shannon McBride-Olsen**
Special Needs	**Jon Howe, Ph.D.**, Sam Hughes NA
Regional Interests (RTA appointment)	**Michael Butterbrodt**, *Inglis Florists*

# SEATS	STAKEHOLDER GROUP REPRESENTATION *(NOMINATING/APPOINTING AUTHORITY)*
4	**Neighbor interests along the project Corridor**, TDOT Director, with input from Wards 5 & 6
4	**Business interests along the project Corridor**, TDOT Director, with input from Wards 5 & 6
1	**Regional interests**, Regional Transportation Authority (RTA)
1	**Special needs and interests**, TDOT Director, with input from Commission on Disability Issues (CODI)
1	**Citizens Transportation Advisory Committee (CTAC) representative**
1	**Alternative modes of transportation representative**, Tucson Pima Bicycle Advisory Committee
1	**Tucson Planning Commission representative**, TDOT Director

CITY OF TUCSON
RTA Regional Transportation Authority
PIMA COUNTY

Project Team

BROADWAY BOULEVARD
EUCLID to COUNTRY CLUB

- The project team mission is to develop a Design Concept Report based on feedback and direction from the Citizens Task Force and the public.
- Project prime and other experts selected through a competitive procurement process.

ROLE / DISCIPLINE	MEMBER
Lead Agency/ Project Managers	**City of Tucson** Beth Abramovitz, P.E. Jennifer Toothaker City of Tucson Department of Transportation
Key City Departments	City Manager's Office Office of Integrated Planning Real Estate
Prime Consultant/ Project Manager	**HDR Engineering** Michael T. Johnson, PE, RLS
Context Sensitive Boulevard Design	**Community Design + Architecture** Phil Erickson, AIA, Architect, President Kevin Saavedra, Urban Designer
Public Involvement	**Kaneen Advertising & Public Relations, Inc.** Joan Beckim, IAP2 certified Joshua Weaver
Traffic Engineering	**Kittelson & Associates, Inc.** Jim Schoen, PE, Principle
Architecture, Historic Assessment	**Swaim Associates, LTD** Phil Swaim, AIA Laura Vertes, AIA, LEED AP Tim Smith, RA
Right-of-Way Cost Estimating	**Tierra Right of Way Services, Ltd.** Mack Dickerson, SR/WA, RW/RAC Myrlene Francis, SR/WA
Cooperating Agency	**Pima County** Rick Ellis, PE, Engineering Division Manager, Pima County Department of Transportation
Cooperating Agency	**Regional Transportation Authority (RTA)** James R. DeGrood, PE, Director of Transportation Services
Business Assistance	**MainStreet Program** Britton Dornquast, Program Manager Jan Aalberts-Waukon

CITY OF TUCSON · RTA Regional Transportation Authority · PIMA COUNTY

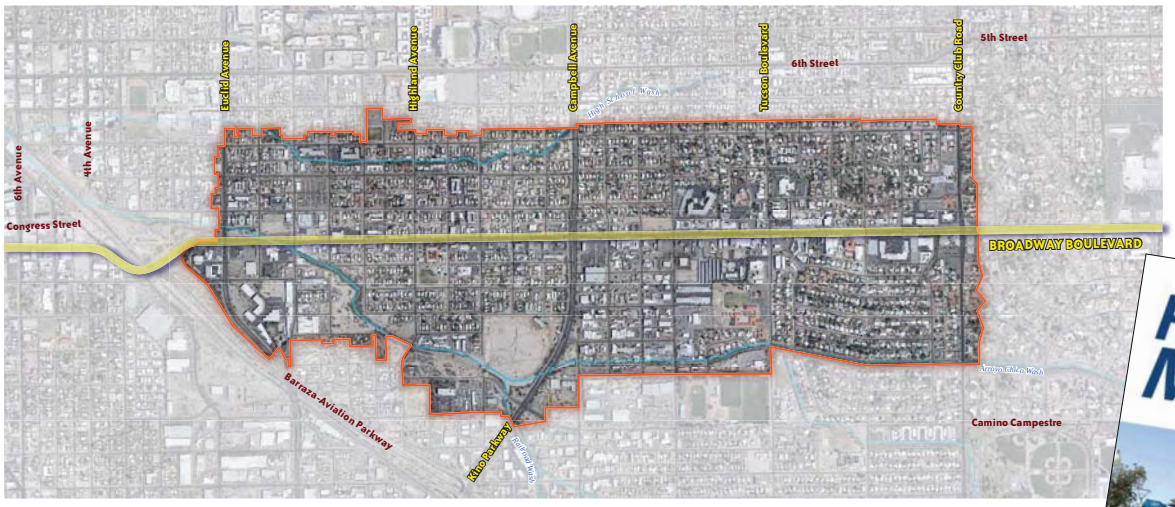
Technical Advisory Committee (TAC)

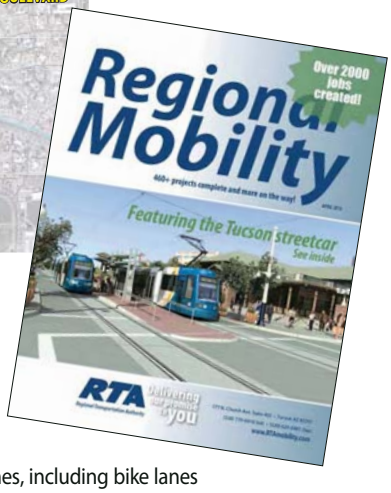
BROADWAY BOULEVARD
EUCLID to COUNTRY CLUB

GROUP REPRESENTATION	COMMITTEE MEMBERS		
Economic Initiatives	Chris Kaselemis	Camila Bekat	
Environmental Services	Pat Tapia		
Fire	Assistant Chief – Laura Baker Lead Inspector – Glenn D'Auria		
General Services	Martin DuPont	Vinnie Hunt	
Integrated Planning	Nicole Gavin Jonathan Mabry	James MacAdam Rebecca Ruopp	
Planning & Development Services	John Beall Jim Mazzocco	Patricia Gehlen Glenn Moyer	Loren Makus David Rivera
Police	Captain Jim McShea		
Real Estate Office	Tim Murphy	Ryan Tripp	
Transportation	Sam Credio Andrew McGovern Donovan Durband Kate Riley (Sun Tran) Gary Wittwer	Daryl Cole Ann Chanecka Shellie Ginn Diahn Swartz	Carlos de Leon Joe Chase Michael Hicks Estevan Tineo
Pima County DOT	Rick Ellis		
PAG/RTA	Jim DeGrood Paul Cella (RTA TMC liaison)	Mike Holder	
TUSD Facilities	Marcus Jones		
University of Arizona	*Parking & Transportation Services* Dave Heineking *College of Architecture, Planning, and Landscape Architecture* Jan Cervelli *Planning Design & Construction* Peter Dourlein	Arthur C. Nelson	

What is the Broadway Boulevard, Euclid to Country Club, Improvement Project?

BROADWAY BOULEVARD
EUCLID to COUNTRY CLUB





The Broadway Boulevard, Euclid to Country Club, Improvement Project is a Corridor Transportation Project that encompasses a 1/4-mile wide corridor along both sides of Broadway Boulevard between Euclid Avenue and Country Club Road. The Project is one of 35 roadway improvement projects included in the 2006 Regional Transportation Authority (RTA) Plan.

Currently, the project is in the technical design phase. The project will integrate roadway design with alternative mode use and will evaluate economic design strategies and enhance community character through recommendations for land use planning and urban design concepts.

The project scope, approved by the City of Tucson Mayor and Council and RTA board in 2014, is to widen Broadway to 6 travel lanes, including bike lanes and improve sidewalks.

Key Decisions Related to the Project Scope

May 2014
Mayor and Council Approve Removing 8-Lane Alignment from Design Considerations

October 2014
Mayor and Council Approve 6-Lane Alignment for Project Scope

December 2014
RTA Board Approve 6-Lane Alignment for Project Scope

PROJECT BUDGET

FUNDING SUMMARY

Funding Sources	%	Amount	Source
A. RTA*	59.0%	$ 42,125,000	Roadway Element
B. City of Tucson	4.2%	3,000,000	Development Impact Fees
C. Pima County**	35.0%	25,000,000	1997 Transportation Bonds
D. Regional	1.7%	1,222,000	PAG Regional Funds (previously expended)
		$ 71,347,000	

* IGA with RTA executed February 1, 2007
** IGA with Pima County executed September 7, 2004

FUNDING

The total amount of funds allocated for the Broadway Boulevard, Euclid to Country Club, Improvement Project is $71.3 million. Approximately $42 million of project funding will be provided by the Regional Transportation Authority, with another $25 million coming from the 1997 Pima County Transportation Bond Improvement Plan, and $3 million from the City of Tucson.

RTA Regional Transportation Authority
CITY OF TUCSON
PIMA COUNTY

CTF-Recommended 6-Lanes Including Transit Baseline Alignment

Strategic Parameters for Design Development

1. CTF-Recommended Baseline Alignment

The direction and guidelines to be followed in developing the Broadway design going forward are to:

1. minimize the number of buildings needing to be acquired and demolished
2. maintain access and as much parking as possible for existing development
3. reduce construction and acquisition costs.

The line work on this drawing indicates the "best case" scenario for minimizing the number of buildings directly impacted. Changes in both the alignment and width will likely result during further design and through the acquisition process. This may change the number of buildings directly impacted.

2. Street Element Widths

The widths of street elements generally are:

- 11' Travel Lane
- 10' Single Left Turn Lane
- 11'/10' Combination for Double Left Turn Lanes
- 10' Right Turn Lane
- 8' Median
- 6' Bike Lane
- 6' Sidewalk
- 5' Deep x 29' Long Bus Shelter

Design Recommendation 1

Primary design parameters are intended to have the least impact to adjacent properties:

- Maintain buildings and viable parcels wherever possible
- Use 6' sidewalks consistent with ADA standards
- Use 6' bike lanes

See these Baseline Alignment maps on tables

Existing 6' sidewalk and 6' bike lane at Mountain Avenue on Broadway

Concept illustration of CTF-Recommended Baseline Alignment

CTF-Recommended 6-Lanes Including Transit Baseline Alignment

Design Recommendation 2

As design is refined and modifications made, or additional right-of-way becomes available, the following secondary parameters prioritize adding elements back in to street design:

1. Provide 7' bike lanes and elevated cycle track where feasible
2. Widen sidewalks to as much as 8'
3. Provide landscaped buffer
   - Enhance pedestrian environment
   - Improve visual quality
   - Achieve City's Green Streets policy

Strategic Parameters for Design Development

3. Excess Right-of-Way Width

When design refinements and acquisition results in additional right-of-way width, it will be allocated in the following order:

1. Widen bike lane up to 7' and provide elevated cycle track where uninterrupted stretches of sufficient length exist.
2. Widen sidewalk to as much as 8'.
3. Provide a landscaped buffer between the bike lane and sidewalk of up to 8' width.

The width of excess property available will be determined during the design/acquisition process, and will depend on decisions by property owners as well as the project design.

Example elevated cycle track

Source: NACTO

Example wider sidewalk

Secondary design example: 6' sidewalk, 4' landscape buffer & 7' cycle track

Secondary design example: 8' sidewalk, 8' landscape buffer & 7' cycle track

CTF-Recommended 6-Lanes Including Transit Baseline Alignment

Design Recommendation 3

All Task Force members support the concept of Broadway as a priority transit corridor. They support dedicating lanes for transit as soon as funding is available for high-capacity transit, or Mayor and Council choose.

Dedicated lane with BRT

Streetcar

Example bus stop facilities at Grant & Oracle

Strategic Parameters for Design Development

Broadway Transit Facilities Improvements included in the Task Force Baseline Alignment:

- Bus shelters at all stops
- Bus pullouts at Campbell and Euclid intersections; sized for 2 standard buses or 1 longer articulated bus
- More convenient and safer bus stop locations

Strategic Parameters for Design Modifications

Other Potential Design Features, if feasible and space allows:

1. **Bus Pullouts.** Bus pullouts will be provided at arterial intersections with sufficient length to accommodate two buses (local and express) concurrently. Bus pullouts will be provided at other fully signalized intersections if directed by the City.
2. **Bicycle Bypasses.** Bicycle bypasses behind bus stops and pullouts will be provided where feasible. In such cases, the bicycle lane passes behind the bus platform. This decreases conflicts between cyclists and the bus.
3. **Green Streets and Water Harvesting.** City of Tucson has a policy of providing water harvesting and green street treatment of stormwater whenever feasible, and additional space within the street can provide for this landscape.

Other potential Transit Facilities Improvements that will be considered during technical design:

- Level boarding onto low floor buses
- Queue jumps at intersections
- Transit priority at signals
- Fare payment before boarding
- Street design that can convert to accommodate future high-capacity transit more easily
- Relocating utilities to accommodate easier implementation of future high-capacity transit (e.g., streetcar, Bus Rapid Transit, light rail)

Bicycle "bypass" simulation

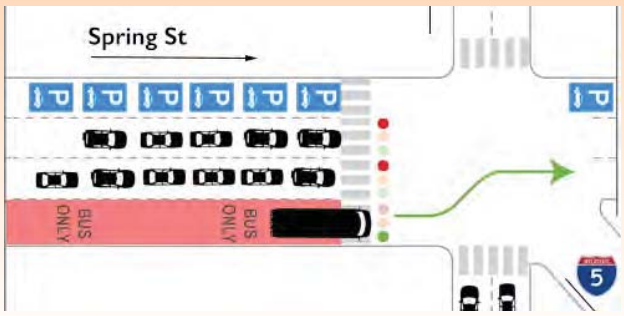
Bicycle "bypass" Example in Seattle

Source: NACTO

Green Streets and Water Harvesting

Queue jumps at intersections

Source: TheUrbanist.org



Strategic Parameters for Design Modifications

Constraints and opportunities arise during the technical design process and modifications are often made. For example, **sidewalk and buffer width may increase** to provide space for:

Utilities (such as electric poles and wires, signal boxes, and fire hydrants) and Street Lamps and Signals

Driveways, disabled access, slopes, and retaining walls to properties at different elevations

To meet ADA, gentle slopes for disabled access must be incorporated into designs where topography and grade differentials require it.

As shown here, the parking lot is at a higher elevation than the road. Retaining walls stabilize the existing property. The new sidewalk and driveway and disabled access meets ADA compatible slopes and sidewalk widths.

Exit door swing must be taken into consideration when buildings abut the sidewalk

Strategic Parameters for Design Modifications

Constraints and opportunities arise during the technical design process and modifications are often made. For example, **alignment and street improvements may shift** to:

Reduce total number of property acquisitions and costs by avoiding more expensive acquisitions, avoiding acquisitions and relocations, and/or not impacting both sides of the street in the same block.

Initial Property Impact Assessments

	Directly Impacted Buildings	Potential Full Acquisitions
CTF-Recommended *March 26, 2015*	9	85

Examples of design refinements done on other city corridors, also called "cures," were arrived at during design and/or negotiations with property owners. City avoids taking full ownership, allows businesses to be preserved, reduced acquisition costs, and avoided demolitions.

Strategic Parameters for Design Development

4. Directly Impacted Buildings

Buildings that would extend into the footprint of the proposed improvements are referred to here as "directly impacted." In the CTF-Recommended Base Alignment drawing, those directed impacted buildings are fully or partially between blue lines that are the back of sidewalk. Because the street element widths are already minimal, avoiding those direct impacts can only happen by shifting the alignment.

While the intent of the CTF-Recommended Baseline Alignment is to retain as many existing structures as possible, it is recognized that even if a building is not directly impacted by the improvements that does not ensure it will not ultimately be acquired and demolished. That determination will be made during the design/acquisition process, depending on:

1. Engineering factors such as loss of access and parking, ability to provide ADA-compliant access, provisions for utilities, grade differential, drainage and constructability;
2. Economic factors of acquisition negotiations such as cost of cure vs. total acquisition; and,
3. Building code and public safety issues.

****Acquisition of property does not always mean demolition****

5. Parking & Access Approach

Parking and access to existing buildings will be maintained where practicable. The priority of parking approaches will be as follows:

1. Maintain public access to existing parking. This provides the least chance of acquisition occurring.
2. Maintain sufficient space between the buildings and street such that adjacent property owners are able to establish joint access/parking facilities, if they choose. Any improvements needed by the private property owners cannot, by state statute, be included as part of a public project outright, but could be included in a transaction for partial acquisition.
3. Access to properties will generally be governed by the City's access management ordinance.

Provide adequate space for parking and access by discussing options with affected property owners (see alignment maps and Development Diagrams for more options)

Example 1: Shared access through driveways , access lane that would allow drivers the ability to pull up to shared angled parking places in front of the businesses. Sidewalks abut the front of the buildings.

Example 2: Possible options explored include on street parking on Plumer, shared driveway access, access lanes, and front parking; shared parking lot (or private parking for specific properties) on vacant land.

For Position Only – Development Diagrams Still in Production

2015 Project Schedule & Design Milestones

Anticipated 2015 Project Schedule

April 30 CTF review of feedback from Open House; finalize recommendation materials of materials for the Mayor and Council. Check **www.tucsonaz.gov/broadway** for meeting details.

May City provides response to Road Safety Assessment findings

June 9 Anticipated date that the Tucson Mayor and Council will consider adoption of baseline alignment and design considerations.

Summer/Fall 2015

- CTF and project team work and hold meetings to complete the Design Concept Report to be approved by the Mayor and Council.
- Real Estate acquisition and relocation planning activities get underway.
- Tucson's Major Streets and Routes Plan amendment process begins to replace the 1989 alignment in with the 2015 adopted alignment.
- Technical design on roadway continues.

Technical Design Milestones

Now – 30%	60%	90%	100%	Construction
– Adopt Baseline Alignment – Design Concept Report – Design Review & Refinement – Road Safety Assessment – Amend Major Streets and Routes Plan – 30% Plans – Relocation Planning – Cost Estimates	– Design Review & Refinement – Acquisition Negotiations – Detailed Design Refinements – Utility Conflicts Identified/ Relocation Planning – Construction Estimate	– Design Review & Refinement – Acquisition Negotiations/ Relocations/ Cure Plans – Engineering Details Refined – Demolitions – Utilities Relocations	– Minor Design Refinements – 100% Plans – Final Construction Estimate – Construction Schedule & Phasing	– Construction Bid; Award of Contract – Construction Begins – Public Outreach

Public Outreach and Community Involvement

✦ Task Force Meetings ✦ Public Open Houses ✦ Business & Property Owner Meetings
✦ Informational Presentations ✦ Pre-Construction Meetings

Road Safety Assessments (RSA)

The Broadway: Euclid to Country Club Roadway Improvement Project underwent an Road Safety Assessment (RSA) in March, 2015. A RSA is a formal safety performance examination of an existing or future road or intersection by an **independent, multidisciplinary** team, typically made up of Engineers, Law Enforcement, Emergency Services, Maintenance, or anyone else with an interest in improving safety. At this level of design, such an analysis can be cost effective in identifying modifications to design elements based on safety evaluations.

The goal of a RSA is to :

1. determine elements of the road that may present a safety concern: to what extent, to which users, and under what circumstances,
2. determine what opportunities exist to eliminate or mitigate identified safety concerns, and
3. identify recommendations for safety improvements to be considered by the owning agency.

Examples of challenging environments to user safety

Ramp is inaccessible to users in wheelchairs or walkers

Lack of sidewalk means pedestrians are using bike lane

Location of pole is an obstacle for anyone traveling this sidewalk, especially disabled individuals

Lack of facilities increases user exposure to potential collisions

The benefits of a RSA are reduced crash frequency, reduced crash severity, and addressing multimodal safety concerns. Pre-construction (aka design) RSAs may reduce costs by identifying safety issues and correcting them before projects are built, and has the side benefit of promoting awareness of safe design practices.

Pima Association of Government's RSA Program assists its member jurisdictions by identifying roadways and intersections with the greatest safety concerns, performing RSAs at identified sites to assess safety deficiencies and make recommendations for improving safety performance, and assisting jurisdictions in acquiring federal and state safety funding (Highway Safety Improvement Program (HSIP)) to implement safety improvements.

RSA Process

1. Start-up Meeting; Crash Data Review

2. Site Visit (Day & Night Fieldwork)

3. RSA Analysis

4. Preliminary Findings Meeting

5. RSA Report (Received on 4/17/15)

Broadway Boulevard:
Euclid Avenue to Country Club Road
Design Level Road Safety Assessment

Prepared for:
City of Tucson DOT

Prepared by:

Funded by:

April 2015

6. Road Owner Response

MEMORANDUM

7. Implementation

Potential Major Streets and Routes (MS&R) Plan Amendment

If Mayor and Council approve an alignment for Broadway Blvd., between Euclid Avenue and Country Club Road, an amendment to the MS&R Plan would be needed to reflect the new alignment, requiring changes to page 24 and the map of the MS&R Plan as shown on this display.

APPENDIX

Corridor Study Maps

Corridor studies have been prepared for the following street segments. Contact the Engineering Division for special centerline information.

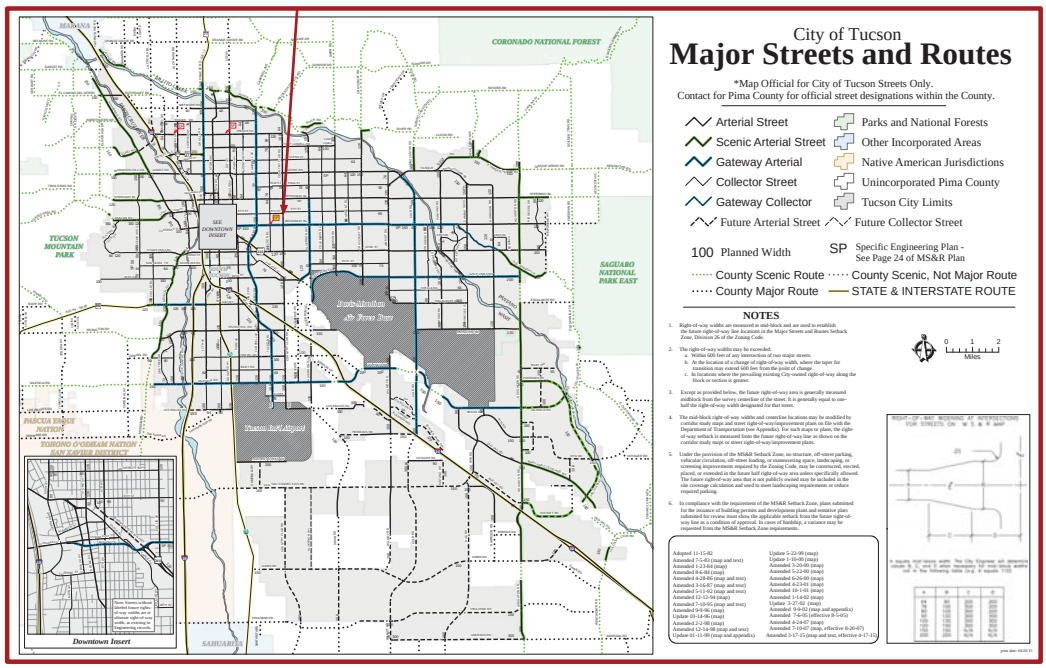
Street	Segment

Several corridor studies have been initiated and completed by the City of Tucson. One which is on hold by direction of the Mayor and Council, is a study of the Mission Road alignment south of Congress Street. However, as other formal studies are initiated, they will be listed in this section of the *Plan* in the next *MS&R* update.

Barraza - Aviation Parkway Corridor Study - Broadway to Interstate 10.

Specific Engineering Plans

The following street segments are indicated on the map with **SP**, having engineering plans on file with the Engineering Division, who should be contacted for right-of-way information.

Streets	Segment	Map No.
Broadway Boulevard	*~~First Avenue~~ Country Club to Kolb Road	R-89-05
***Broadway Boulevard**	**Euclid to Country Club**	**R-2015-001**
Campbell Avenue	Glenn to Water Street	R-82-04
Campbell Avenue	Water Street to Elm Street	R-94-03
Grant Road	Oracle Road to Swan Road	R-2014-004
Greasewood Road	22nd Street to 36th Street	R-80-04
Kino Parkway	36th Street to Benson Hwy.	R-82-03
Speedway Boulevard	Alvernon Way to Tucson Blvd.	R-88-05
Speedway Boulevard	Tucson Blvd to Euclid Ave.	R-87-04
Speedway Boulevard	Euclid Avenue to Stone Ave.	R-90-12
SR 210	Alvernon Way to Benson Hwy.	
Valley Road	Ajo Way to Mission Road	
1st Avenue at Prince	Intersection	R-87-12
Prince at Flowing Wells	Intersection	R-88-02

**** Potential addition to this page, if Mayor and Council approve alignment for Broadway Blvd.***